

INCH-POUND

MIL-T-27/129A
13 March 1991
SUPERSEDING
MIL-T-27/129
27 SEPTEMBER 1976

MILITARY SPECIFICATION SHEET

TRANSFORMER, POWER, STEPDOWN, STEP-UP, TF5S03ZZ948

(A) Inactive for new design after the date of this specification.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-T-27.

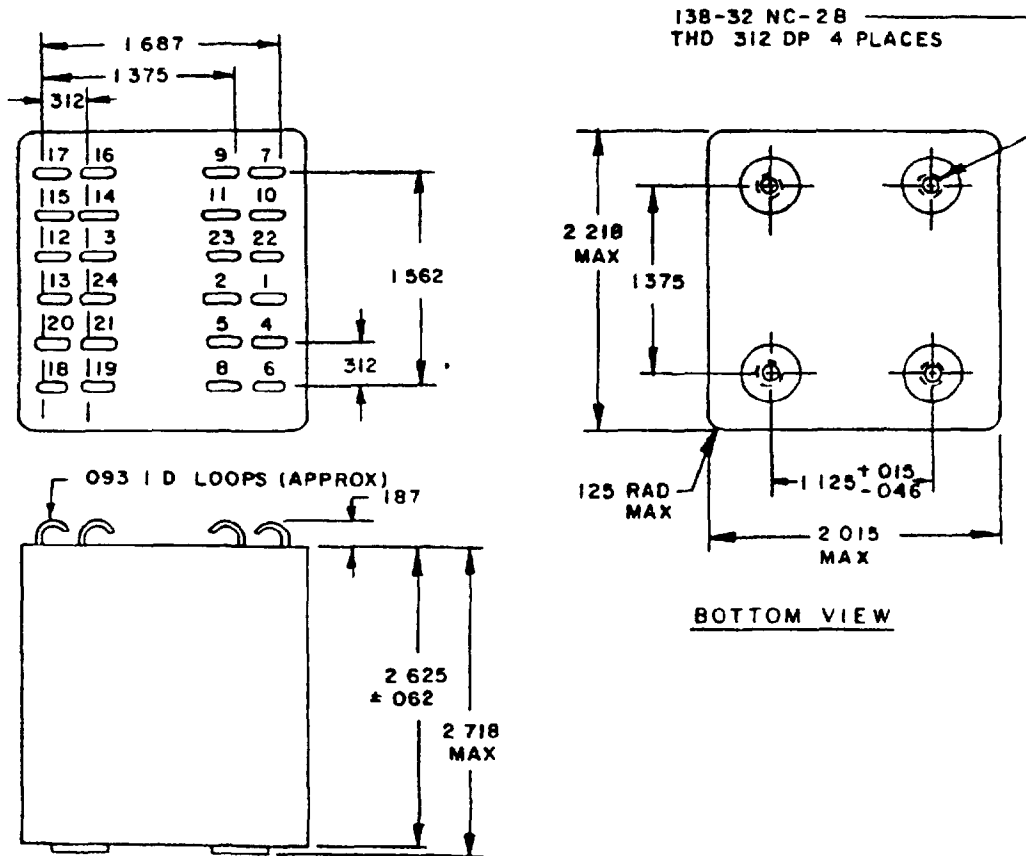
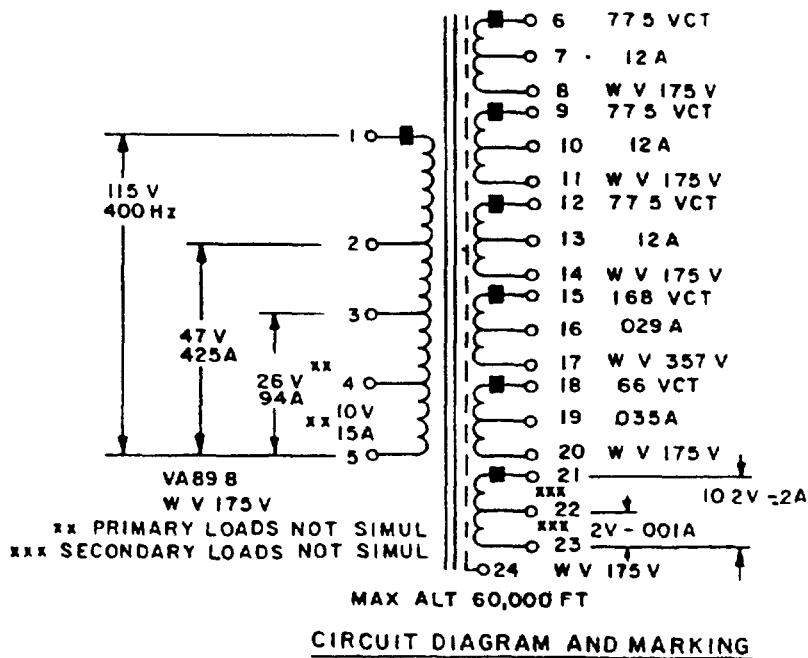


FIGURE 1. Dimensions and configurations.

(A) denotes changes



Inches	mm	Inches	mm
.015	0.38	1.125	28.58
.046	1.17	1.375	34.92
.062	1.57	1.562	39.67
.093	2.36	1.687	42.85
.125	3.18	2.015	51.18
.138	3.50	2.218	56.34
.187	4.75	2.625	66.68
.312	7.92	2.718	69.04

NOTES:

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Tolerance on terminal position dimensions is ± 0.15 (0.40 mm)
4. Marking shall be on the side of the case.

FIGURE 1. Dimensions and configurations - Continued.

MIL-T-27/129A

REQUIREMENTS: (When numbers in parentheses, i.e., (1-2) are used, they indicate the winding and the extreme terminals of the windings.)

Electrical ratings:

Primary current: 0.78 ampere, maximum.

Volt-ampere: 89.8.

Primary voltage:

- (1-5): 115 V rms, 400 Hz.
- (2-5): 47 V rms, 400 Hz 0.425 ampere rms.
- (3-5): 26 V rms, 400 Hz, 0.94 ampere rms.
- (4-5): 10 V rms, 400 Hz, 0.15 ampere rms.

Secondary voltage:

- (6-8), (9-11), and (12-14): 77.5 V rms center tap, 0.12 ampere rms, respectively.
- (15-17): 168 V rms center tap, 0.029 ampere rms
- (18-20): 66 V rms center tap, 0.035 ampere rms.
- (21-23): 10.2 V rms ampere rms.
- (22-23): 2 V rms ampere rms.

DC resistance:

- (1-5): 2.8 ohms maximum.
- (6-8): 15 ohms maximum.
- (9-11): 15.1 ohms maximum.
- (12-14): 16 ohms maximum.
- (15-17): 100 ohms maximum.
- (18-20): 43 ohms maximum.
- (21-23): 1.65 ohms maximum.

Working voltage:

- (1-5), (6-8), (9-11), (12-14), (18-20), and (21-23): 175 volts peak, respectively.
- (15-17): 375 volts peak.

Design and construction:

Dimensions and configuration. See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Epoxy.

Terminals. Solder type.

Terminal height: 0.562 inch.

Weight: 1.75 pounds maximum.

Operating temperature range: -55°C to +130°C.

Altitude. 60,000 feet maximum.

Terminal strength: MIL-STD-202, method 211, test condition A, 5 pounds.

MIL-T-27/129A

Dielectric withstanding voltage

At sea level:

Primary (1-5) 500 V rms.

Secondary (6-8), (9-11), (12-14), (18-20), and (21-23): 500 V rms, respectively.

Shield (24). 500 V rms.
(15-17): 1,000 V rms.

At reduced barometric pressure:

Primary (1-5) 300 V rms.

Secondary: (6-8), (9-11), (12-14), (18-20), (21-23): 300 V rms, respectively.

Shield (24) 300 V rms.
(15-17): 460 V rms.

Electrical characteristics:

No load: With 115 volts, 400 Hz across (1-5), current in (1-5) shall not exceed 175 mA maximum.

Voltage across:

(6-8), (9-11), and (12-14): 79.8 volts center tap, ± 2 percent, respectively.
(15-17): 169 volts center tap ± 2 percent.
(18-20): 67.48 volts center tap ± 2 percent.
(2-5): 47.5 volts, ± 2 percent.
(3-5): 26.5 volts, ± 2 percent.
(4-5): 10.33 volts.
(21-23): 10.67 volts, ± 2 percent.
(22-23): 2.066 volts.

Rated load: With 115 volts, 400 Hz across (1-5).

Voltage across

(6-8), (9-11), and (12-14) shall be 77.5 volts center tap ± 3 percent at 0.12 ampere rms, respectively.
(15-17) shall be 168 volts center tap ± 2 percent at 0.029 ampere rms.
(18-20) shall be 66 volts center tap ± 3 percent at 0.035 ampere rms.
(2-5) shall be 47 volts ± 3 percent at 0.425 ampere rms.
(3-5): 26 volts ± 2 percent at 0.94 ampere rms.
(4-5): 10 volts at 0.15 ampere rms.
(21-23) 10.2 volts ± 2 percent at 0.2 ampere rms.
(22-23) ± 2 percent at 0.001 ampere rms.

Electrostatic shielding The voltage ratio shall be a minimum of 5 to 1 at 200 kHz.

Polarity: Additive with terminals 5, 6, 8, 9, 11, 12, 14, 15, 17, 18, 20 and 21 connected.

Temperature rise 16°C maximum with 115 volts, 400 Hz across (1-5) at an ambient temperature of 114°C maximum

MIL-T-27/129A

① - Quality assurance provisions:

Qualification inspection: Not applicable.

Quality conformance inspection: Groups A and B tests of MIL-T-27 shall be applicable.

Marking location: See figure 1.

Part number: M27/129-01.

CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

Army - MI
Navy - OS, SH
Air Force - 17, 85, 99
DLA - ES

User activities:

Army - AR, ME, SG
Navy - AS, MC
Air Force - 19

Preparing activity:

Army - ER

Agent:

DLA - ES

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